REMARKS

Presently, claims 82-103 are pending in the application. A Request for Continued Examination ("RCE") under 37 C.F.R. §1.114 is being submitted herewith. Claims 82 and 87 have been amended to correct formal errors noted by Applicants. New claims 91-103 have been added to alternatively recite the present invention. Support for the features of new claims 91-103 may be found, for example, at page 9, line 26 – page 10, line 30; page 20, line 28 – page 21, line 13; and page 23, line 30 – page 24, line 15 of the specification. Accordingly, no new matter has been added to the application by the foregoing amendments.

Information Disclosure Statement

Applicants note that the Examiner has not acknowledged the Information Disclosure Statement filed in the present application on August 6, 2004.

Applicants respectfully request that the Examiner forward an initialed copy of the above-identified Information Disclosure Statement, showing consideration of all the references listed therein, with the next Office Action.

Claim Rejection – § 103(a)

The Examiner has rejected claims 82-90 under 35 U.S.C. §103(a) as being unpatentable over Alexander in view of U.S. Patent No. 5,446,919 to Wilkins ("Wilkins"). The Examiner contends that Alexander teaches all features of the present invention with the exception of retrieving demographic information associated with the targeted programming that describes a demographic characteristic of a group associated with the targeted programming. The Examiner further contends that Wilkins teaches this feature, and concludes that it would have been obvious to Wilkins' teachings into Alexander's systems to achieve Applicants' claimed invention. Applicants respectfully traverse this rejection.

Alexander teaches improvements to electronic program guides ("EPGs"), including viewer interaction capabilities, opportunities for advertisers to reach viewers

and the creation of viewer profiles. Alexander's system allows the viewer to interact with the EPG, including selecting programming (including advertisements) for viewing and/or recording. The user may also interact with the EPG by scrolling through the listings which are not displayed on the initial screen. The EPG in Alexander collects information about the viewer, either by obtaining the requested information directly from viewer input or learning the desired information by recording the viewer's "actions and circumstances surrounding those actions" with the EPG (see column 28, lines 30-59 of Alexander). The information that the EPG records includes instructions provided to the EPG (e.g., a channel change) as well as the time that that change was requested and the programming switched to and from as a result of the change. The EPG also records the absence of user interaction. Alexander teaches that a "viewer profile analysis program" performs a "simple statistical analysis" of the collected data and, combined with the viewer's profile information, develops "viewer characteristics" (see column 29, lines 30-60 of Alexander). The profile analysis program also compares one viewer profile to other viewer profiles to further aid in displaying similar content to similar viewers. Alexander then uses the viewer characteristics to customize the EPG, so that the viewer is presented with programming and/or advertisements that are likely to be of interest, both in terms of content and order of display. Alexander also teaches that the EPG may display advertisements based on specific programming that the viewer is currently watching or that certain advertisements may be assigned to particular "classes" of programming.

Independent claim 82, as amended, recites:

> A computer-implemented method of including a subscriber in a group based on subscriber interaction with targeted programming, the method comprising:
>
> (a) monitoring subscriber interactions with the targeted programming;
>
> (b) retrieving information associated with the targeted programming, wherein the information describes at least one demographic characteristic of at least one group associated with the targeted programming;

> (c) retrieving heuristic rules associated with the subscriber interactions, wherein the heuristic rules infer at least one subscriber demographic based on the subscriber interactions;
>
> (d) correlating the at least one subscriber demographic with the at least one demographic characteristic of the at least one group; and
>
> (e) associating the subscriber with the group if there is a sufficient correlation between the at least one subscriber demographic and the at least one demographic characteristic of the at least one group. (emphasis added)

Alexander does not teach or suggest correlating a subscriber demographic with a demographic of a group such that the subscriber may be associated with that group if a sufficient correlation exists. The Examiner relies on column 30, lines 29-44 of Alexander as evidence of this concept. However, Applicants respectfully submit that the cited portion of Alexander, in fact, teaches the well-known concept of collaborative filtering, and not Applicants' claimed invention:

> ***Collaborative filtering*** (CF) is the method of making automatic predictions (filtering) about the interests of a user by collecting taste information from many users (collaborating). The underlying assumption of CF approach is that: Those who agreed in the past tend to agree again in the future.
>
> For example, a collaborative filtering or recommender system for music tastes could make predictions about which music a user should like given a partial list of that user's tastes (likes or dislikes).
>
> Collaborative Filtering systems usually take two steps: 1. Looking for users who share the same rating patterns with the active user (the user who the prediction is for). 2. Use the ratings from those like-minded users found in step 1 to calculate a prediction for the active user (*www.wikipedia.com*)

The well-known definition above is precisely what is being described at column 30, lines 38-44 of Alexander, namely that the profiles of other EPG users are searched and compared with the profile of the present individual. Then, the Profile Program in Alexander assumes that the subject viewer would like to watch something that is watched

by one of the users whose profile matched that of the subject viewer. That is, Alexander teaches that an EPG may be customized such that programming associated with a particular "theme" is presented if a viewer is more apt to view programming or advertisements within that theme. As such, in Alexander, there is no correlation of a subscriber demographic with "the at least one demographic of the group," since the subject viewer in Alexander is not compared or assigned to a group. Alexander simply generates programming for an individual that matches profiles of similar individuals. Accordingly, the portion of Alexander cited by the Examiner actually teaches collaborative filtering and not correlating a subscriber with a demographic characteristic of a group – two different concepts.

Not only does Alexander not assign or associate a subscriber to any particular group, as recited in claim 82, but any relationship that a subscriber has with a theme in Alexander is determined based solely on a subscriber's previous interactions with that theme. Stated differently, in Alexander, if a subscriber views programming that is part of a particular theme, Alexander's EPG will present other programming from the same theme. In contrast, in Applicants' invention of claim 82, the subscriber is associated with a group by correlating a heuristically determined subscriber demographic with a demographic characteristic of a group. In claim 82, the group association is not determined based on whether the subscriber previously viewed material from or selected that group, or whether a subscriber having a similar profile is in that group. Rather, in Applicants' invention the group association is based on the subscriber's interactions with targeted programming generally, a heuristically determined inference about the subscriber, and a sufficiently high correlation of that inference with an attribute of the particular group being examined.

Additionally, Applicants strenuously, but respectfully disagree with the Examiner's contention that Alexander teaches the application and/or use of heuristic rules to "infer at least one subscriber demographic," as recited in independent claim 82. Initially, Applicants point out that, in the previous Office Action, dated December 28, 2004, the Examiner *admitted* that Alexander "***fails to disclose the use of heuristic rules***..." (see pg. 5 of the previous Office Action). The Examiner now contends that

Alexander teaches heuristic rules, relying on the disclosure at column 30, lines 1-37 of Alexander, and argues that Alexander teaches a viewer profile program that "***speculates*** on the user's age, marital status and has children" (see page 4 of the present Office Action). However, Alexander does not teach or suggest that there is ever any ***speculation*** in determining the Viewer Characteristics. Alexander's disclosure does not even ever use the term "speculate".

Moreover, Alexander never even mentions or discusses "heuristic" rules. Applicants' acknowledge that Alexander utilizes a "Profile Program" that "performs multiple levels of sophisticated analysis and learning involving numerous comparisons...to develop of multi-dimensional profile of the viewer" (see column 30, lines 1-7). However, the data used by the Profile Program in Alexander is based on a "simple statistical analysis" and "basic viewer profile data". The use of statistical analysis to generate information (e.g., the viewer profile) is different than using *heuristic rules* to develop similar types of information. Alexander's statistical approach is based purely on a mathematical analysis, whereas the use of heuristic rules requires a rule that is used to infer or derive something from the data that could not be calculated simply from a statistical analysis of the data. Moreover, Alexander discloses that the viewer characteristics that form the viewer profile are developed "over time," and "with sufficient data" (see column 30, lines 29-30). Such a teaching is consistent with the use of a statistical analysis, but not with heuristic rules. Thus, Alexander's discussion of the Profile Program and the various data points that are utilized therein does not disclose, teach or suggest the use of "heuristic rules". In contrast, in Applicants' invention, heuristic rules are composed of both logical heuristic rules and heuristic rules expressed in terms of conditional probabilities are (see, for example, page 10, lines 8-14 and page 19, line 30 – page 20, line 27 of the specification). Thus, Alexander does not teach or suggest heuristic rules that "infer at least one subscriber demographic based on the subscriber interactions," as recited in claim 82. Accordingly, Alexander does not teach or suggest all of the features of independent claim 82.

Although the Examiner relies on Wilkins for the teaching of retrieving demographic information associated with the targeted programming that describes a

demographic characteristic of a group associated with the targeted programming, Wilkins does not teach or suggest at least the use of heuristic rules to infer at least one subscriber demographic based on the subscriber interactions. Wilkins does also not teach or suggest correlating at least one subscriber demographic with a demographic characteristic of a group and associating such that the subscriber may be associated with that group if a sufficient correlation exists. Accordingly, Wilkins does not teach or suggest all of the features of independent claim 82.

Since neither Alexander nor Wilkins individually teaches or suggests all of the elements recited in independent claim 82, Applicants respectfully submit that, even if Alexander and Wilkins are properly combinable, such a combination would still not teach or suggest the invention of claim 82. This is because such a combination would still not teach or suggest "retrieving heuristic rules... correlating the at least one subscriber demographic with the at least one demographic of the group; and associating the subscriber with the group if there is a sufficient correlation..." Accordingly, new independent claim 82 is believed to be allowable over the combination of Alexander and Wilkins.

New independent claim 91 recites "applying one or more of the heuristic rules to the subscriber interactions, wherein the heuristic rules infer at least one subscriber demographic from the subscriber interactions; and correlating the at least one subscriber demographic with the at least one demographic characteristic of the at least one group...." Similarly, new independent claim 98 recites "applying one or more of the heuristic rules to the subscriber interactions, wherein the heuristic rules relate the subscriber interactions to at least one subscriber demographic that is not directly observable from the subscriber interactions; and correlating the at least one subscriber demographic with the at least one demographic characteristic of the at least one group...." For the same reasons discussed above with respect to independent claim 82, Applicants respectfully submit that Alexander and Wilkins do not teach or suggest all of the features of independent claims 91 and 98, taken either individually or in combination. Accordingly, independent claims 91 and 98 are believed to be allowable over Alexander and Wilkins.

Dependent claims 83-90, 92-97 and 99-103 are allowable at least by their dependency on independent claims 82, 91 and 98. Reconsideration and withdrawal of the Examiner's §103(a) rejection of claims 82-90 are respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that the Examiner's rejection has been overcome, and that the application, including claims 82-103, is in condition for allowance. Reconsideration and withdrawal of the Examiner's rejection and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

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